

said first copying mode;

receiving the second processed image signal from the external computer via the first bidirectional general-purpose interface in said first copying mode; and outputting the second processed image signal to a printer via a second bidirectional general-purpose interface of a same standard as said first bidirectional general-purpose interface in said first copying mode, or outputting the first processed image signal to the printer via said bidirectional general-purpose interface in said second copying mode,

wherein in said first copying mode, said reading step, said image processing step, said transmission step, said receiving step, and said outputting step are consecutively performed in response to an execution designation by a user, and in said second copying mode, said reading step, said image processing step, said outputting step are consecutively performed.

REMARKS

This application has been reviewed in light of the Office Action dated August 27, 2002. Claims 24, 26, 27, 29, 58, and 59 are presented for examination. Claims 24 and 27, the independent claims, have been amended to define more clearly what Applicants regard as their invention. Favorable reconsideration is requested.

An Information Disclosure Statement and a corresponding Form PTO-1449 was filed on August 6, 2002, as evidenced by the returned receipt postcard bearing the stamp of the Patent and Trademark Office, a copy of which is attached hereto. Applicants respectfully request the Examiner to return an initialed copy of the Form PTO-1449, indicating the reference

cited thereon was considered.

Claim 24 was rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Claim 24 was also rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

Claim 24 has been carefully reviewed and amended as deemed necessary to ensure that they conform fully to the requirements of Section 112 with special attention to the points raised in paragraphs 5-7 of the Office Action. Specifically, Claim 24 has been amended, *inter alia*, to recite, that in a first copying mode, read data is transmitted to an external device, processed there, and then printed, whereas in a second copying mode, read data is printed without being transmitted to or processed by the external device. As for the rejection under 35 U.S.C. § 112, second paragraph, regarding "a second copying mode, performed in sequence in response to a single designation", Claim 24 has been further amended to remove the phrase "in sequence". Support the second copying feature can be found, at least, on page 30, lines 1-9 of the specification. Further, the mode performed in response to a user designation is the first copying mode. Execution of the first copying mode is designated upon depression of two different keys, namely, the copy key 259 and the start/stop key 251, shown in Figure 2 and described on page 15, lines 20-23 of the specification. Accordingly, Claim 24 has been amended to recite "a first copying mode performed in response to an execution designation by a user". It

is believed that the rejections under Section 112, first and second paragraphs, have been obviated, and their withdrawal is therefore respectfully requested.

Claim 27 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,021,892 (*Kita*).

Claims 24 and 59 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kita*, in view of U.S. Patent No. 4,989,163 (*Kawamata et al.*). Claims 24 and 59 were also rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kita*, in view of U.S. Patent No. 5,113,494 (*Menendez*). Claim 26 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kita* in view of *Kawamata et al.* as applied to Claim 24, and further in view of U.S. Patent No. 5,218,458 (*Kochis*). Claim 26 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kita* in view of *Menendez* as applied to Claim 24, and further in view of *Kochis*. Claim 29 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kita* in view of *Kochis*. Claim 58 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kita* in view of *Kawamata et al.* as applied to Claim 24, and further in view of U.S. Patent No. 5,900,947 (*Kenmochi*). Claim 58 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kita* in view of *Menendez* as applied to Claim 24, and further in view of *Kenmochi*.

As shown above, Applicants have amended independent Claims 24 and 27 in terms that more clearly define the present invention. Applicants submit that these amended independent claims, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

The aspect of the present invention set forth in Claim 24 is to an image processing device. The image processing device includes a scanner, a control unit, a first bidirectional general-purpose interface, and a second bidirectional general-purpose interface. The scanner reads an image of a document and outputs an image signal. The control unit includes a control circuit adapted for controlling the image processing device and performing image processing necessary for copying on the image signal output from the scanner to provide a first processed image signal. The first bidirectional general-purpose interface transmits the image signal output by the scanner under control of the control unit to an external computer, which performs image processing necessary for copying on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the external computer. The second bidirectional general-purpose interface, of a same standard as the first bidirectional general-purpose interface, is adapted for outputting the first processed image signal and the second processed image signal to a printer. The image processing device has a plurality of modes including a read mode, a print mode, a first copying mode performed in response to an execution designation by a user, and a second copying mode in which the image signal output from the scanner is outputted to the printer without being processed the external computer. In the first copying mode, the image signal from the scanner is transmitted in order of the control unit, the first bidirectional general-purpose interface, the external computer, the first bidirectional interface, the control unit, and the second bidirectional general-purpose interface so as to perform copying based on the second processed image signal. In the second copying mode, the image signal from the scanner is transmitted in order of the control unit and the second

bidirectional general-purpose interface so as to perform copying based on the first processed image signal.

One important feature of Claim 24 is that in the first copying mode, the image signal from the scanner is transmitted in order of the control unit, the first bidirectional general-purpose interface, the external computer, the first bidirectional interface, the control unit, and the second bidirectional general-purpose interface so as to perform copying based on the second processed image signal. That is, in the first copying mode, read data is transmitted to an external device, processed there, and then printed.

The applied art, alone or in combination, is not seen to disclose or suggest the present invention as defined by independent Claim 24, particularly with respect to, that in the first copying mode, the image signal from the scanner is transmitted in order of the control unit, the first bidirectional general-purpose interface, the external computer, the first bidirectional interface, the control unit, and the second bidirectional general-purpose interface so as to perform copying based on the second processed image signal.

The Office Action states that the first copying mode of the present invention corresponds to the Image Input Function in *Kita et al.* As *Kita et al.* describes the Image Input Function in column 6, line 68 to column 7, line 4, the image data read by the scanner 2 is transmitted to the personal computer 8, which displays the image data on the CRT display and/or files the image data in a floppy disk. This operation, the Image Input Function, lacks the processing of the first copying mode of the present invention, wherein the image signal which is

output by the scanner to an external computer where image processing necessary for copying on the transmitted image signal to provide a second processed image signal is performed.

Applicants understand *Kita et al.* as disclosing a read mode, which corresponds to the Image Input Function (column 6, line 68) and reading image data by the image scanner 2 and transferring the data to the host 8 (column 18, line 24 to column 20, line 12). Applicants further understand *Kita et al.* as disclosing a print mode which corresponds to the Image Print Function (column 7, line 5) and recording image data generated in the host 8 by the image printer 3 (column 20, line 12 to column 21, line 45). Further, *Kita et al.* discloses a second copying mode of the present invention corresponds to the Copy Function of *Kita et al.* (column 6, line 50). However, as noted previously, *Kita et al.* does not teach a function corresponding to the recited first copying mode. The Copy and Facsimile Functions of *Kita et al.* (column 7, line 21) differ from the recited first copying mode in that, the Copy Function (column 6, line 50) merely supplies the data read by the image scanner directly to the image printer under the control of the personal computer. However, *Kita et al.* fails to teach a first copying mode where the image signal from the scanner is transmitted in order of the control unit, the first bidirectional general-purpose interface, the external computer, the first bidirectional interface, the control unit, and the second bidirectional general-purpose interface so as to perform copying based on the second processed image signal, as recited in Claim 24.

The Office Action cites column 3, lines 46-48 as disclosing an external computer 8 performing necessary image processing on the transmitted image signal to provide a second processed image signal. Applicants understand the cited reference as merely disclosing

that "[v]arious image and data processing are carried out by the computer 8 according to the programs for respective applications." Applicants have found nothing in *Kita et al.* that would teach or suggest an external computer, which performs image processing necessary for copying on the transmitted image signal to provide a second processed image signal, as recited in Claim 24.

For at least these reasons, independent Claim 24 is believed clearly patentable over *Kita et al.*, taken alone.

Kawamata et al. and *Menendez et al.* are not seen to add anything that would overcome the deficiencies of *Kita et al.*. In particular, neither *Kawamata et al.* nor *Menendez et al.* are seen to disclose the recited first copying mode.

Accordingly, Applicants submit that Claim 24 is patentable over *Kita et al.*, *Kawamata et al.* and/or *Menendez et al.*, whether considered separately or in combination, and respectfully request withdrawal of the rejection of Claim 24 under 35 U.S.C. § 103(a).

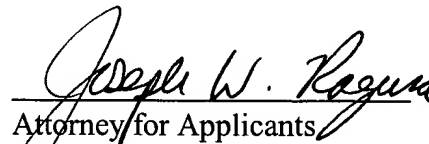
Independent Claim 27 includes a feature similar to that discussed above in connection with Claim 24. Accordingly, Claim 27 is believed to be patentable for substantially the same reasons as discussed above in connection with Claim 24.

The other rejected claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

24. (Seven Times Amended) An image processing device comprising:
- a scanner for reading an image of a document and outputting an image signal;
 - a control unit including a control circuit adapted for controlling said device and performing image processing necessary for copying on the image signal output from said scanner to provide a first processed image signal;
 - a first bidirectional general-purpose interface for transmitting the image signal output by said scanner under control of said control unit to an external computer, which performs image processing necessary for copying on the transmitted image signal to provide a second processed image signal, and for receiving the second processed image signal from the external computer; and
 - a second bidirectional general-purpose interface of a same standard as said first bidirectional general-purpose interface adapted for outputting the first processed image signal and the second processed image signal to a printer,
- wherein said device has a plurality of modes including a read mode, a print mode, a first copying mode performed in response to an execution designation by a user], in which the image signal output from said scanner is outputted to said printer using the external computer], and a second copying mode[, performed in sequence in response to a single

designation,] in which the image signal output from said scanner is outputted to said printer without [using] being processed the external computer,

in the first copying mode, the image signal from said scanner being transmitted in order of: said control unit, said first bidirectional general-purpose interface, the external computer, said first bidirectional interface, said control unit, and said second bidirectional general-purpose interface [in the first copying mode] so as to perform copying based on the second processed image signal, and

in the second copying mode, the image signal from said scanner being transmitted in order of: said control unit and said second bidirectional general-purpose interface[, in the second mode] so as to perform copying based on the first processed image signal.

27. (Seven Times Amended) An image processing method for an image processing device capable of operating in a plurality of modes including a read mode, a print mode, a first copying mode, and a second copying mode, said method comprising the steps of:

reading an image of a document and outputting an image signal by a scanner;

performing image processing necessary for copying on the output image signal by using a control unit for controlling the image processing device to provide a first processed image signal;

transmitting the image signal output by the scanner under control of the control unit to an external computer via a first bidirectional general-purpose interface to be

processed, by image processing necessary for copying, into a second processed image signal in said first copying mode;

receiving the second processed image signal from the external computer via the first bidirectional general-purpose interface in said first copying mode; and outputting [the first or] the second processed image signal to a printer via a second bidirectional general-purpose interface of a same standard as said first bidirectional general-purpose interface in said first copying mode, or outputting the first processed image signal to the printer via said bidirectional-general-purpose interface in said second copying mode. , 8

which
wherein in said first copying mode, said reading step, said image processing step, said transmission step, said receiving step, and said outputting step are consecutively performed in response to an execution designation by a user, and in said second copying mode, said reading step, said image processing step, said outputting step are consecutively performed[;

performing copying based on the second processed image signal in a first copying mode, in which the image signal output from the scanner is outputted to the printer without using the external computer by transmitting the image signal from the scanner in order of: the control unit, the first bidirectional general-purpose interface, the external computer, the first bidirectional general-purpose interface, the control unit, and the second bidirectional general-purpose interface].